

Appl. No. : 10/007,304
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VERSION OF AMENDMENTS SHOWING CHANGES MADE

43. (Amended) The diffusion barrier of Claim 35, wherein the ~~different-metal~~ compound is an oxide of the reactive metal.

44. (Amended) The diffusion barrier of Claim 43, wherein the ~~different-metal~~ compound is selected from the group consisting of aluminum oxide and silicon oxide.

45. (Amended) The diffusion barrier of Claim 35, wherein the ~~different-metal~~ compound is a nitride of the reactive metal.

46. (Amended) The diffusion barrier of Claim 45, wherein the ~~different-metal~~ compound is selected from the group consisting of aluminum nitride and silicon nitride.

50. (Amended) A diffusion barrier for a copper interconnect comprising:

a first layer of metal nitride;

a layer of reactive metal over the first layer of metal nitride; and

a second layer of metal nitride over the layer of reactive metal, wherein the grain boundaries of the first and second metal nitride layers are stuffed with a ~~different-metal~~ compound of a metal different from the metal in the nitride layers.

51. (Amended) The diffusion barrier of Claim 50, wherein the ~~different-metal~~ compound of a metal different from the metal in the nitride layers is selected from the group consisting of an oxide of the reactive metal and a nitride of the reactive metal.